‘Join-In’
Energy Conservation Education Grant

Final Report

September 30, 2003

Join-In

BANNOCK COUNTY ECONOMIC
DEVELOPMENT
THROUGH ENERGY EFFICIENCY

Idaho
Energy
Division

Rebuild Idaho

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Executive Summary

The Energy Division of the Idaho Department of Water Resources received a grant from the Department of Energy for energy education. A test area was chosen to develop a pilot project for the State. Idaho State University, a Rebuild America Partner, and the Pocatello Chamber of Commerce agreed to develop and implement a community-wide energy education program. The project goal was to modify behaviors to infuse money into the local economy by reaching Bannock County's 29,000 households with an energy conservation message. This was accomplished by implementing the following:

- Developing a low/no cost sustainable community awareness program
- Developing an Energy Smart Schools program for six elementary schools within Bannock county's two school districts
- Presenting an energy program to local elementary schools
- Speaking to local civic groups and business leaders about conservation within their community
- Training and providing materials to local teachers for an energy education program
- Utilizing University students to assist in the program
- Implementing an energy hotline

A local media consultant was hired to assist in developing a low cost media campaign that would enhance the energy education project. Public service announcements were run on local radio and television stations that would reach the target audience and hopefully inspire others to conserve. An energy hotline was created to answer questions and to aid the community with conducting energy audits of residences and businesses.

The elementary school program was developed with the help of the National Energy Foundation. Energy training was provided to twelve 4 - 6 grade teachers from six schools, as well as University students and personnel. This group implemented energy programs and training within their respective schools. Additionally, the students were given tools to

survey and promote energy conservation at home. Since the program's inception, a conservation message was extended to over 100,000 residents.

Project Goals

With the increasing cost of energy in small communities coupled with a stagnant economy, local governments are searching for ways to revitalize their communities and bring in more revenue. The City of Pocatello and Bannock County have watched as several large employers closed their doors, reducing the amount of disposable income and tax revenues.

In lieu of finding additional employers to relocate, no-cost energy savings in households and businesses would bring in needed disposable dollars. With 29,000 households in the community each consuming $129 in utilities per month, a 5% savings would return over $2,000,000 in annual disposable income. The core idea was to accomplish these savings through behavioral changes. The 5% projected savings could easily be accomplished through simple behavioral modifications. The project was designed to be a pilot for duplication in other areas of the State.

Because of the make-up and demographics of the State, the area selected was of particular benefit. As with much of the State, there are only a few major population centers, all of which are surrounded by rural communities. Bannock County offered the ability to service both groups under the same umbrella. It has one large and several small cities within the county, as well as a rural and urban school district. This has allowed for a diverse program model that will fit anywhere within the State.

Project Methods and Approach

Idaho State University was contracted to develop, implement, and manage a community based energy education program. The University and the Pocatello Chamber of Commerce joined as partners to oversee the project. In November 2002, community leaders and ISU representatives met to formally accept the grant and to discuss the scope and content of this project. It was decided there would be a two-phased approach to the project. The first phase would involve reaching the general community; the second targeting elementary schools, teachers and students.

A local media consulting firm was brought in to help in developing an energy conservation message around the theme of enforcing behavioral changes within the community. The consultants helped develop and implement a low-cost/no-cost campaign for delivering energy conservation messages, specifically to: advise on what media was available; how best to use it at little or no cost; what message format would best suit the target audience; liaison with local media; produce a how-to manual for campaign creation and implementation; and finally develop a methodology for the continuation of energy conservation education within the area.

ISU and the consultant's first mission was coining a slogan the community could identify with as a theme and message. The phrase 'Join-In' was adopted. This was chosen due to the ease of manipulation around several conservation messages ie., Join-In to save (water, energy, fuel). People would associate this catch phrase with conservation regardless of the content of the specific target. Once the slogan was adopted, the message and delivery system were addressed.

Local media outlets were used to produce and broadcast these messages. The NBC affiliate produced a 15 and 30 second spot to be broadcast in different time slots and on different days, running from March to June as time was available. The spots would run as PSA's, which were produced by the station. As these were PSA's, which the

station is not required to air, the frequency was not as steady as a full campaign. However, it should be noted the spots were the product of a low/no cost campaign. Voice-overs were also made of the two television messages, to be used as part of a radio campaign. The radio spots were broadcast on the local KISU FM radio station.

Another part of the low/no cost campaign was for the consultants to develop an operating procedures campaign manual for Bannock County. This will be used not only for the current project, but to assist in the continuation of community conservation education. Given the makeup of the community, and to reach the maximum number of individuals with the message, certain civic groups were contacted.

Pocatello has many different civic groups including several Rotary clubs, Kiwanis clubs, and a Chamber of Commerce. Many of these groups are made up of local businessmen and community leaders. It was decided to target these groups as well, to reach a specific demographic of the community aside from the general individual population. A slightly different message was developed that dealt specifically with business owners and civic leaders. The focus was to deliver a targeted message that addressed conservation and savings practices this group could implement in their businesses. In the second phase of the project the focus was on elementary students in grades 4-6.

Approval had already been received from the two local school districts when the grant was formally received. Now we had to go back and begin formulating how the message would be presented, and which schools in the district would volunteer to participate. The two districts took markedly different approaches in adopting this program. The rural district administration determined all schools would participate and instructed us to contact each principal. The school principals were informed the district was going to participate in the program and they were to provide two teachers to participate. The urban district took a more structured approach, somewhat more bureaucratic, and this would prove to be the superior method.

The district informed all principals of the opportunity to participate in the program. They took the approach that the district would support any school that expressed interest. Numerous school principals came

forward requesting additional information. E-mail's were exchanged detailing information on the proposed project, and the participation required of the school and its teacher. After two to three weeks of correspondence, three schools agreed to participate.
As mentioned above, requested information dealt with the extent of participation by the school, principal and teachers. The volunteerism in the part of teachers and principals was the primary focus. It was believed that those who volunteered would take ownership and ensure success. When specific schools and teachers were chosen, educational materials were selected and training scheduled.

The Idaho Energy Division had previously worked with a Rebuild America partner, the National Energy Foundation (NEF) who is a non-profit organization that specializes in energy education for K-12 grades. They provide educational materials and training for the participants. Two programs from their Energy Action in Schools Program were selected for implementation, *Energy Fundamentals* and *The Energy Patrol.* Using a small group of students, The *Energy Patrol* performs actual audits of the school and patrols for energy and resource wastes in the school. The *Energy Fundamentals* program takes a more in-depth look at different forms of resources, and how conservation may be applied. Each program will be implemented in the schools by two teachers.

Two volunteer teachers signed on to participate, one for each program. All teachers, as well as University staff and students were put through a four hour training session set up by the NEF. The University hosted the training as part of its role in overseeing the project. Since the project required volunteering of personal time for the teachers and students, a stipend and dinner was provided as compensation. The twelve teachers were divided into two groups, one for the *Energy Fundamentals* and one for the *Energy Patrol*. Cross training of the two programs would be implemented once the teachers returned to their respective schools. In addition to the training received, each teacher was given educational and program materials for use at their respective schools.

The timing of the training and scheduled implementation of the programs corresponded closely to the schools changing of curriculum units. Jefferson Elementary in District 25 and Lava Elementary in

District 21 were able to incorporate the programs within a month of their training. The other schools implemented portions of each program within the school year, and made plans to incorporate the remaining elements for the Fall sessions. While many of the ideas were new to the schools and teachers, Indian Hills Elementary used the training and materials to enhance existing conservation education. In addition to the training and materials provided, each school was given funds for the purchase of additional energy and resource conservation materials. Lava Elementary used the funds to purchase supplies needed to implement their audits and school-wide education programs. Two additional schools in District 25 volunteered to participate in an *Energy Program Presentation*, as positive returns were recognized.

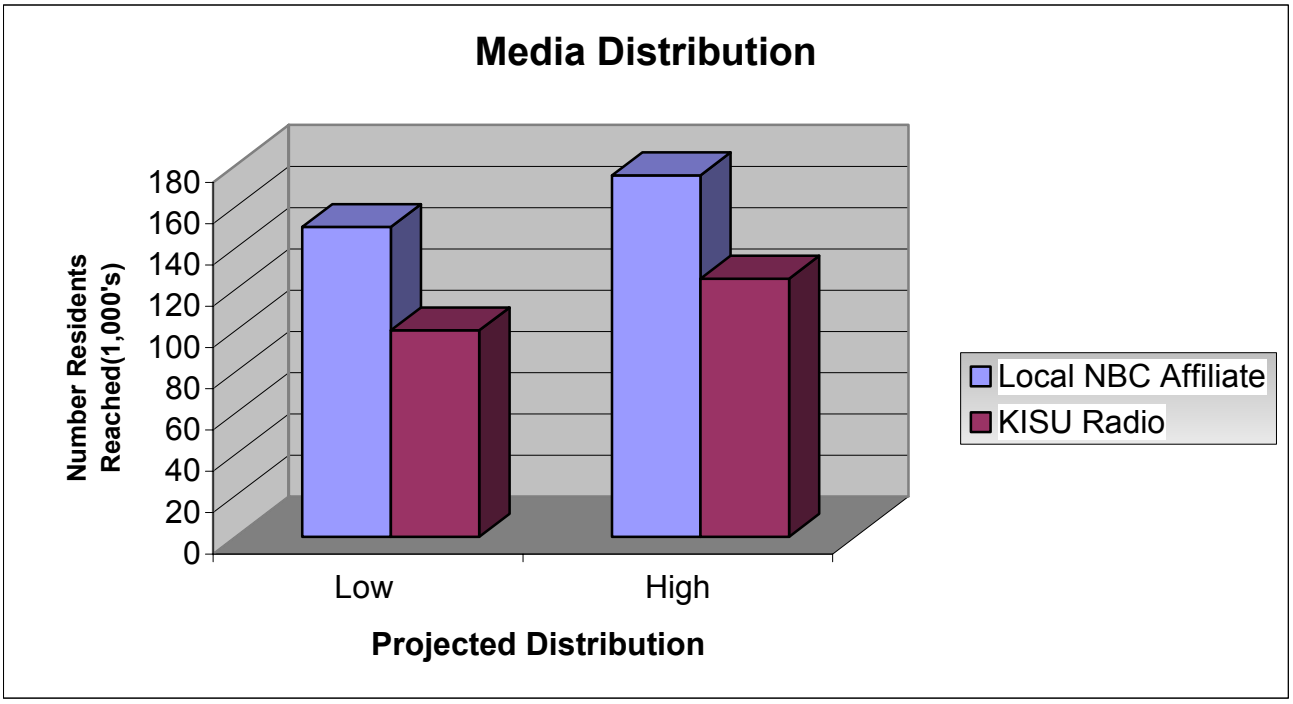
The University Energy Manager, Engineer, and engineering students developed an interactive program to introduce 4 - 6 grade students to the idea of conservation and life cycle costing. Three different activities were designed, one for resource conservation, one for water conservation, and one for calculating the cost of incandescent lighting versus compact fluorescent. Every grade level was broken into three groups. A brief introduction and clear instructions were given to the students prior to their breaking into their groups. Every 10 minutes the groups rotated to a different stations. Time for the groups to compete for prizes at the conclusion of the presentation was also factored into the program. A spokesperson was selected from each group to compete in our 'Tower of Power' game. The participants were asked questions relating to information they received at each station. The group who answered most questions correctly received a prize for the group. Each grade was also given a certificate of award for participating in the program. Teachers and principals liked the program so well they want to do it again in the Fall.

Presenting information, and then asking people to conserve resources and energy lead to questions and information sharing. ISU created an 'Energy Hotline' for purposes of answering individual's questions about saving energy, and money. Information on home and business energy audits, educational information, specific web sites, and staff resources were made available through this service. Although not utilized as hoped, the service will continue as part of the University's commitment to the local community. Overall, a complete community-wide pilot

program which included; radio and television messages, school programs, home audits, civic and community leader education, energy hotline, and the full resources of the University was developed and implemented for Bannock County.

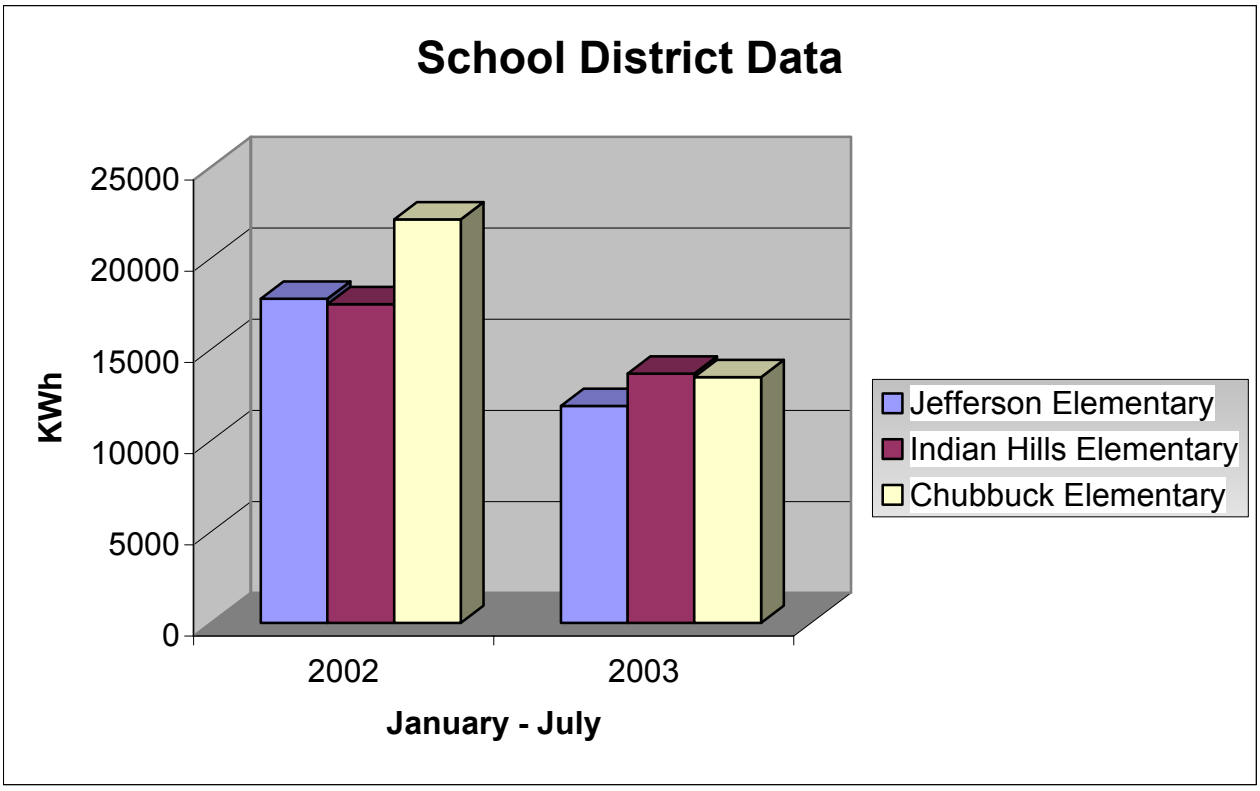
Project Results

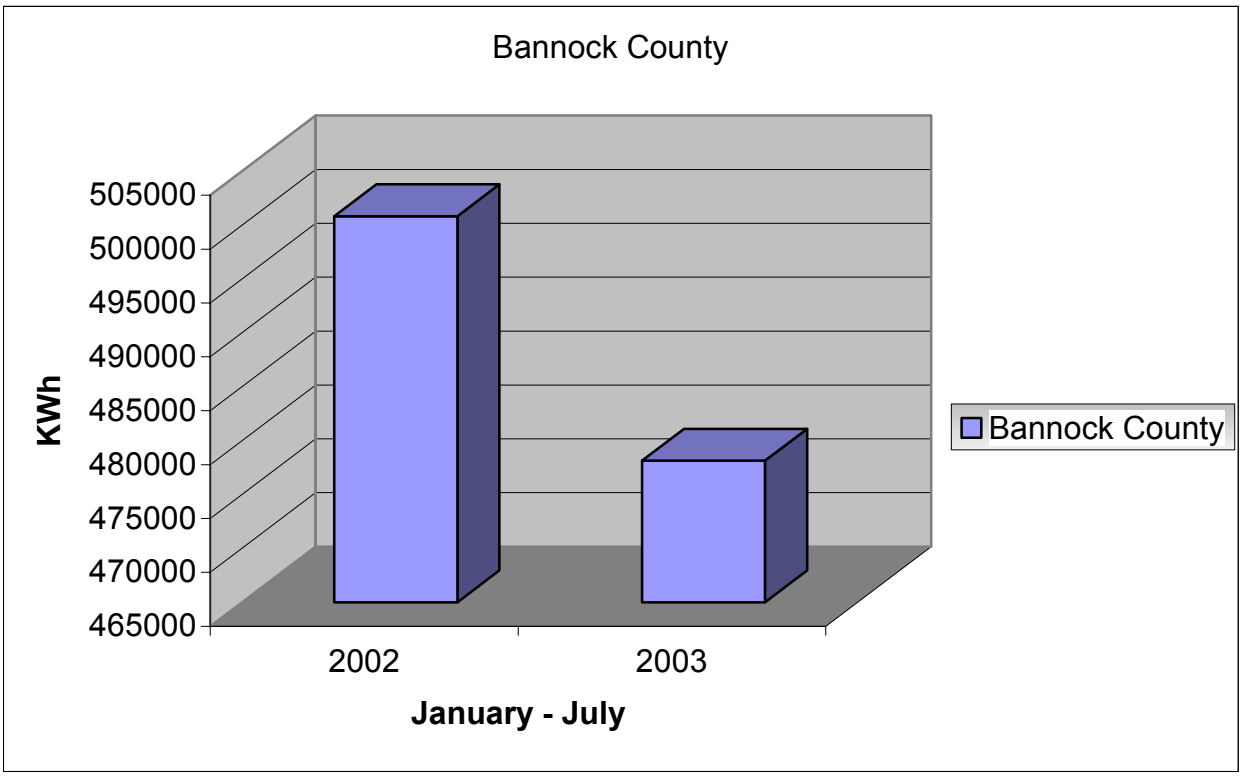
Both radio and television time was used to distribute messages to the public. The local radio station reaches 100,000 to 125,000 listeners within its service area, with the NBC affiliate reaching 150,000 to 175,000. The radio station scheduled the messages to run from March through December. The frequency of the message is two per day for seven days a week, with time slots varying throughout the day. The television spots have run as PSA announcements throughout the April - June time frame with varying time of day spots. With this distribution and frequency, it is believed at least one individual in each residence was reached with the message. The graph below shows the projected audience reached with each announcement.



The purpose behind producing a message for energy conservation is to have conservation take place. The following graphs show the decrease

in energy consumption for one of the local school districts, as well as the targeted county. Three schools from district 25 participated in the program. There was an overall drop in energy usage at all three schools from January through July 2003 as compared to the same time in 2002. Both districts realized the same decrease in consumption, but on a slightly different scale. These numbers should be qualified by a slight decrease in cumulative heating degree days and cooling degree days for 2003.





Successes

In our efforts to reach all households within the county with a conservation message, there were other successes along the way.

College Student Involvement

Students from both the Colleges of Education and Engineering were recruited to assist in developing and delivering an educational message. Eight students participated in training by the NEF that introduced them to materials, techniques, and lesson plans for conservation education. The eight students used this training to help educate participating 4 - 6 grade students. The students from the College of Education were drawn from a special science and technology class devoted to teaching them skills and methods they will eventually use in their careers. Participating students were beginning their in-service student teaching, and the tools provided them as part of their participation in this project could only enhance their contribution to the education system.

Teacher Accomplishment

As with many volunteer programs, some were adequate and others exceeded expectations. Cydney Kunz (Lava Elementary) from District 21 chose to further her professional training as part of the NEF scholarship program. She was recently named Outstanding Teacher by the NEF for her commitment to not only her professional growth, but the contribution she has made to the students, school, and district in conservation education.

Student Initiative

One reason/benefit of choosing an organization specializing in conservation education in K - 12 was the wide range of resource material available. The home audit booklet was an invaluable tool for spreading the message of conservation. Aside from hearing a conservation message on the radio or seeing it on TV, children asking their parents to help perform an energy audit proved to be an exceptional proactive tool. Not only did the students learn about their own homes, their questions got their parents to examine their conservation habits. Students and parents then helped each other to form positive conservation habits.

Peer Educational Opportunities

This pilot project for the State of Idaho, Idaho State University, and strategic partner Rebuild America originated interest in energy savings by other educational institutions. The Energy Manager for the University was asked to speak at Rebuild's Spring Western Peer Forum. An outline of the project was presented, along with information on how to begin similar projects. The Energy Manager also submitted an article on the project which was published in the March 2003, Pacific Coast Association of Physical Plant Administrator's (PCAPPA) publication. Several entities have contacted the University for advice on how they might begin a similar project.

Lessons

Opportunities for knowledge, altering of pre-conceived ideas, and valuable experience were all contained in this pilot. Although a small project, the scope was very diverse. A sampling of lessons learned are

listed below:

-Do not assume that people are not conserving on their own. For those groups already involved with conservation, we providing them with additional materials to support their efforts.

-There may be other community/business groups involved in what you are trying to accomplish. Idaho Power was already involved with educational and community projects through their office. We partnered with them to deliver our elementary school messages. They provided ideas we incorporated, and materials we used to give the students and teachers.

-Because you have a noble energy conservation cause, not everyone is receptive. This is an unusual project due to the participants volunteering to be involved. Teachers and school districts are overburdened with requirements, and are not necessarily looking for additional projects. The agency needs to set up the project in a way to assist them in what they are already doing or required to do. The information and lessons provided met all requirements for the State educational system. It saved teachers time from researching new lessons.

-When dealing with a local school district, administrators, and teachers, the approach must be top down. The district must be fully supportive of the project principals, and teachers. In turn, the principals must volunteer their school and ask for their teachers to volunteer, as well. As previously mentioned, forcing 'just one more thing' on this group will kill any hope of success. All must buy in and be behind the project. We offered the teachers that volunteered materials for their class, and the principals funds for their school to purchase additional materials of their choosing.

-Getting everyone together is very difficult. With different schedules and responsibilities, partners time is very valuable. Although we devoted specific resources to this project, others did not have that luxury. E-mail and other forms of contact need to be used whenever possible to keep group meetings to a minimum. Also, expect many hurdles in bringing everyone together. Many are willing to sign up,

but do not fully realize the commitment. It's important not to get discouraged and to keep the end goal in mind.

Sustainability

Throughout the project's development, an important element was sustainability. The conservation message presented was for individuals to modify their behavior to conserve energy, and ultimately save money. In behavioral modification, repetition plays a significant role. The public needs to continue receiving a message that will reinforce good habits beyond the time frame of this project, and we worked to develop these areas. The conservation messages will continue to be utilized by local media beyond this project, and new messages will be produced as allowable by the media and their resources. University media will also be used to assist in producing and delivering additional information to the community. Many of the schools that participated in the project are able to fully incorporate conservation materials into their Fall semester curriculum.

Working with the NEF produced unexpected results. They asked us to participate in a new multi-region grant. This grant will begin in the Spring, and the University will act as a key partner for the Idaho region. This will allow expansion beyond the small county that was the focus of this project. The University is also entering into Performance Contracting for energy conservation. A portion of this contract will be conservation through behavioral modification, and will undoubtedly spill over into the local community with the conservation message. The University has committed to continue with providing services and information to help the community with conservation wherever possible. The energy hotline, audit assistance, peer group assistance, and community programs will continue.

Project Summary

Idaho State University and the Pocatello Chamber of Commerce partnered to develop a low-cost/no-cost pilot project for energy conservation. The project distributed a conservation message to all of

the 29,000 households in Bannock County. Households and businesses that saved energy through behavior modification were able to contribute the savings to the community as additional disposable income. Both the general public and local schools were targeted with conservation messages and programs.

Television and radio media were used to produce and deliver messages to the public, while the University and NEF focused on local 4 - 6 grade student in six schools in the area. Through speaking engagements at respective service organizations, local businessmen and community leaders were targeted. Through this process existing partnerships were enhanced and new partnerships were formed. A stronger community partnership was developed when resources of the University, previously unrecognized, were incorporated into the program.

Conservation in the University community and local community gained much needed exposure through this project. Individuals were given tools and ideas on how they may help in the broad scope of resource conservation and ultimately produce individual savings through no-cost behavioral changes. These behavioral modifications are sustainable, and will last well beyond this projects length. The seeds planted in the young students of the community will continue to grow and be carried into the future as conservation behavioral habits.